

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF NEW JERSEY
CAMDEN VICINAGE**

IN THE MATTER OF:
GEORGE J. SOUED, M.D.,
as Owner of the 1994 58-foot Ocean Yachts
powerboat M/V WILLIAM G II,
Hull No. XYU2058FL394, Official No.
1000307, her tenders, gear, furniture, tackle,
appurtenances, etc.

Plaintiff.

Civil No. 20-06674 (RMB/MJS)

OPINION

APPEARANCES:

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RENÉE MARIE BUMB, Chief United States District Judge:

This case is about a fire that destroyed two yachts causing both boats to sink and damaging the dock housing the vessels. Typical with fires causing property damage, the property owners point their fingers at one another blaming the other. Following the fire, Claimant Seaview Harbor Marina (Marina) demanded the sunken boats' owners pay for the damage to its dock. Claimant ACE American Insurance Company (ACE), who insured one of the sunken vessels, hired a fire investigator to determine the origin and cause of the fire. That investigator determined the fire started on Plaintiff's, Dr. George J. Soued, M.D. (Soued), boat and spread to the other boat and dock because of an improper power cord connection.

Soued filed this action seeking to limit his liability under the Shipowners' Limitation of Liability Act (Limitation Act), 46 U.S.C. § 30501 *et seq.*, and exoneration under Rule F of the Supplemental Rules for Certain Admiralty and Maritime Claims. Soued now moves for summary judgment, seeking to exclude ACE's investigator's expert reports and opinions arguing those opinions are unreliable. With no expert testimony, Soued argues ACE cannot show he was negligent or his boat unseaworthy—either showing could defeat Soued's efforts to obtain exoneration or liability limitation. ACE counters, contending its expert's opinions are methodologically sound and Soued's contrary arguments go to the weight—not the admissibility—of the investigator's expert opinions.

This Court agrees with ACE and **DENIES** Soued's summary judgment motion.

I. BACKGROUND

A. The Marina

Soued moored his boat, a 58-foot yacht named the William G II (William G), at the Marina. [Pl. Statement of Undisputed Material Facts ¶ 1 (SOMF) (Docket No. 64-2).] Another boat, belonging to ACE's insured, a 65-foot yacht named the Majestic, was also moored at the Marina in a boat slip next to the William G. [*Id.* ¶¶ 1, 4.] Both boats were moored in boat slips at the Marina's F-Dock—the William G in slip F-39 and the Majestic in slip F-41. [*Id.* at ¶¶ 4-5.] A houseboat was also moored at the F-Dock in slip F-37, next to the William G. [*Id.* ¶ 4.]

Apparently, the F-Dock historically had electrical problems with power pedestals used to supply power to the boats docked there, such as “chronic voltage irregularities” causing boats not to receive “the proper voltages” or suffer “voltage swings.” [*Id.* ¶ 8.] Several boatowners complained about the voltage problems. [*Id.*] A Marina handyman, an unlicensed electrician, often made electrical repairs to the pedestals. [*Id.*] Besides those problems, a 2018 lightning strike at the Marina caused “electrical damage” to “several boats” at the F-Dock, including the William G. [*Id.* ¶ 9.] While the parties dispute where the lightning hit (at a particular sailboat or not), they agree a lightning strike happened and boats docked on the F-Dock suffered electrical damage. [*Id.*; ACE's Resp. to Pl.'s SOMF ¶ 9 (ACE's Resp.) (Docket No. 72-2).]

According to Soued, his boat slip at the Marina, F-39, suffered electrical problems leading to “two electrical fire events.” [SOMF ¶ 10.] Soued had rented his boat slip to another boatowner of a boat called the “Lady Lisa.” [Certif. of Rachel R. Hager, Esq. ¶ 5, Ex. 4 (Hager Certif.) (Tr. 29:11 to 25, 41:5 to 11) (Docket Nos. 65-4, 65-9).] For both “electrical

fire events,” the Lady Lisa’s owner had the boat’s power cord connected to the F-39 slip’s power pedestal. [SOMF ¶ 10.]

In the first event, the Lady Lisa’s davit—a small crane used to hoist equipment—“burst into flames.” [SOMF ¶ 10; Hager Certif. ¶ 3, Ex. 2 (Tr. 36:5 to 10) (Docket No. 65-6).] Another boatowner at the Marina saw the fire and turned the power off at the F-39 slip’s power pedestal stopping the “smoke and fire.” [SOMF ¶ 10; Hager Certif. ¶ 3, Ex. 2 (Tr. 37:15 to 17).] In the second event, the power cord connected to the F-39 slip’s power pedestal and the Lady Lisa was “badly burned.” [SOMF ¶ 10.] While ACE disputes Soued’s characterization of the power cord, see ACE’s Resp. ¶ 10, a boatowner who saw the power cord, Edward Gravenhorst, found the cord “overheated to the point where . . . the insulated cover over the plug had melted and distorted.” [Hager Certif. ¶ 3, Ex. 2 (Tr. 41:2 to 15).] Gravenhorst did not observe the incident causing the melting, but “only the end result.” [*Id.* (Tr. 44:13 to 15).] He believed “heat” caused the damage because he observed “charring,” specifically, “the insulation on the wires themselves where they go into the plug had charred off.” [*Id.* (Tr. 44:20 to 45:11).] Gravenhorst helped the Lady Lisa’s owner replace the plug on the damaged power cord. [*Id.* (Tr. 43:17 to 44:5).]

B. The Fire at the Marina

After those incidents, Soued winterized the William G; a process requiring the removal of liquids on the boat that might freeze and replaced with antifreeze. [SOMF ¶ 2; Hager Certif. ¶ 5, Ex. 4 (Tr. 47:1 to 9) (Docket No. 65-8).] About 10 days later, Soued checked on the William G, which was moored in the F-39 slip, “to make sure the dock lines were secure.” [SOMF ¶¶ 3-4.] Soued had the William G connected to the F-39 slip’s power pedestal by “two UL approved 50-amp marine-grade power cords (two cords connected

together to extend their length).” [SOMF ¶ 6.] The boat’s “battery chargers” were in “standby mode” with the lighting circuit breakers “ON” but the onboard light switches “OFF.” [Id.] Simply put, the William G was in low- to no-power mode.

A few days later, shortly after midnight, a fire engulfed both the William G and the Majestic destroying both vessels. [Id. ¶ 7.] No witness saw how or where the fire started. [Id.] A nearby homeowner saw the fire “only after it was raging with both boats ablaze.” [Id.] The fire “completely consumed” both vessels causing them to sink in their slips. [Id.] The houseboat moored in the boat slip next to the William G suffered some exposure damage. [Decl. of James Cote ¶ 9, Ex. 6, at 4-5 (Cote Decl.) (Docket No. 65-18).]

C. The Fire Investigation

About a month after the fire, ACE and Soued’s insurance company sent investigators to determine the origin and cause of the fire. [SOMF ¶ 11.] ACE, who insured the Majestic, sent Certified Fire & Explosion Investigator Michael E. Schaal (Schaal) to investigate the fire. [Cote Decl. ¶ 9, Ex. 4 (Docket Nos. 65-16).] ACE has identified Schaal as its expert witness here on the origin and cause of the fire. The fire investigation spanned over two-days—the first at another marina where the William G and the Majestic had been towed, and the second at the Marina. [SOMF ¶ 11.]

On the first day, Schaal and the other investigators started by photographing both boats. [Hager Certif. ¶ 4, Ex. 3 (Tr. 18:3 to 19:7) (Docket No. 65-7).] Schaal started at the bow of each boat and worked “in a 360-degree direction” taking photographs of the vessels. [Id. (Tr. 19:11 to 20:19).] After photographing the boats, Schaal and the other investigators started physically examining the Majestic. [Id. (Tr. 20:23 to 21:4).]

Schaal spent an hour physically examining the Majestic, mainly looking at the “electrical systems on the aft side.” [*Id.* (Tr. 19:11 to 20:19).] Schaal looked for “evidence of abnormal electrical activity, anything that would have been a causative effect for the fire.” [*Id.* (Tr. 25:22 to 25).] While he found the remains of a shore power cord, he did not find evidence of abnormal electrical activity on the Majestic. [*Id.* (Tr. 25:25 to 26:19).] Schaal examined the boat’s electrical panel, but could not determine whether the switches were “on” “[b]ecause they were too badly damaged.” [*Id.* (Tr. 28:17 to 29:5).] Schaal did not explore other areas of the Majestic because he was “convinced” the fire did not start there. [*Id.* (Tr. 28:13 to 16).]. And no one collected or preserved any evidence from the Majestic. [*Id.* (Tr. 30:23 to 31:1).]

After inspecting the Majestic, Schaal and the investigators spent the “[b]etter part of the day” examining the William G. [*Id.* (Tr. 30:23 to 31:1, 61:9 to 11).] Schaal started by documenting “the burn patterns from bow to the stern.” [*Id.* (Tr. 31:19 to 31:25).] Based on those patterns and the wind direction on the night of the fire, Schaal determined the “fire progressed from the starboard side of the cockpit to the portside of the cockpit.” [*Id.* (Tr. 42:8 to 14).] He then started to clear off debris from the boat and “delayer” the vessel; a process involving the removal of debris “top down to get down all the way into the hull of the vessel.” [*Id.* (Tr. 31:25 to 32:2, 33:4 to 8).] While delayering the William G, Schaal uncovered the “remains” of an extension cord on the deck and “the remains of what was the connections or male blades to the [Glendinning] cord.” [*Id.* (Tr. 36:25 to 37:4).] He also uncovered remains of the female terminals of an “EEL cord[] receptable” and the wiring for both power cords. [Decl. of Michael E. Schaal in Opp’n to Pl.’s Mot. for Summ. J. ¶ 11 (Schaal Decl.) (Docket

No. 72-4).]. Schaal determined the area he found the power cords' remnants to be the origin point of the fire. [Hager Certif. ¶ 4, Ex. 3 (Tr. 39:10 to 13).]

Schaal then removed the cords from the boat, measured them, and documented their condition. [*Id.* (Tr. 45:9 to 18).] He observed evidence of “abnormal electrical activity” such as “pitting” and arcing on the male blades of the cords. [*Id.* (Tr. 45:25, 46:7 to 15).] He also noticed some of the male blades on the cords were missing. [*Id.*] Based on his experience, Schaal determined the abnormal electrical activity to be the cause of the fire, rather than the result. [*Id.* (Tr. 47:11 to 23).] According to Schaal, if the fire started elsewhere on the vessel, the fire would “typically attack those circuits or the cords that power that and it should deenergize it.” [*Id.*; see also Tr. 48:17 to 49:2 (“I would not except to find this damage to these components if it was attacked by fire.”).] The investigators preserved the cords as evidence. [*Id.* (Tr. 58:24 to 59:15).] The investigators also collected the remains of a light switch in the “area of origin” because “it had a little bit of pitting on it.” [*Id.* (Tr. 58:12 to 20).] Schaal inspected no other system on the William G “because they were not involved and not present in the area of origin.” [*Id.* (Tr. 55:25 to 56:5).] And Schaal performed no follow up investigation on the light switch collected. [*Id.* (Tr. 58:21 to 23).]

The next day, Schaal and the investigators went to the Marina to examine the F-39 slip's power pedestal. [SOMF ¶ 11.] Electrical engineers took voltage readings from the pedestal. [*Id.*] Schaal learned the engineers observed “voltage irregularities from the pedestal.” [Hager Certif. ¶ 4, Ex. 3 (Tr. 65:2 to 7).] Schaal made no determination on whether the pedestal caused or contributed to the fire. [*Id.* (Tr. 66:24 to 67:2).] In fact, Schaal found the pedestal to be “undamaged by the fire.” [Schaal Decl. ¶ 25.]

Following the inspections, Schaal issued a series of reports concluding the fire originated on the William G based on his application of the National Fire Protection Association 921, A Guide for Fire and Explosion Investigations (2017 ed.) (NFPA). [Cote Decl. ¶ 9, Exs. 4-6.] In his first report, Schaal determined that “[b]ased upon [his] fire pattern analysis” of the Majestic, the Majestic “suffered exposure damage” and that his exterior examination of the boat confirmed the fire did not originate there. [*Id.*, Ex. 4, at 2.] Turning to the William G, Schaal concluded “the fire originated on the starboard side, aft area” of the boat, specifically, “in the area of the shore power connections.” [*Id.*] During his investigation of the William G, Schaal observed a shore power cord attached to the William G’s Glendinning shore power cord—that is, a power cord attached to a reel assembly located in the William G’s engine room designed to charge the boat’s power system. [*Id.*; Hager Certif. ¶ 5, Ex. 4 (Tr. 11:6 to 14:11).] Schaal observed “evidence of abnormal electrical activity where the 2 power cords connected.” [Cote Decl. ¶ 9, Ex. 4, at 2.] Based on his investigation and using the NFPA 921 as a guide, Schaal made these conclusions:

- The fire originated on the William G “specifically in the area of the starboard side aft section of the vessel where the 2 power cords were connected;”
- “The cause of the fire was electrical in nature;”
- “The material(s) first ignited were ordinary combustible materials;”
- “The act or omissions that brought the ignition source and the material first ignited together resulting from abnormal electrical activity at the connection point between the [Glendinning] power cord and the . . . shore power cord;” and
- “All other possible sources of ignition were considered and ruled out during the course of our investigation.”

[*Id.* at 2-3.]

Following his review of discovery materials, deposition testimony, and the Marina's surveillance footage, Schaal issued a second report echoing his first report's conclusions. [*Id.* Ex. 5 (Docket No. 65-17).] But he added another cause for the fire: Soued's use of a shore power cord to connect to the William G's Glendinning power cord. [*Id.* at 9.] Schaal concluded an improper connection between the cords caused "it to overheat, causing the fire." [*Id.*] The investigator asserted the failure to use "sealing rings" or "collars" when connecting power cords can cause "poor connections, corrosion, and high resistive connections." [*Id.*] Those conditions can create "a significant fire hazard," which according to Schaal, "resulted in this case." [*Id.*]

In reaching this added conclusion, Schaal relied on Soued's admission that the shore power cord attached to the William G's Glendinning power cord "did not have a sealing collar." [*Id.* at 8.] In Schaal's experience, failing to use sealing collars or rings and improperly connecting shore power cords "causes the large majority of vessel fires." [*Id.*] The investigator also pointed to the Marina's Executive Director's, Joseph Stewart, observation of the shore power cord attached to the William G's Glendinning power cord. [*Id.*] Stewart observed at different times a "plastic bag with zip ties" between the connection of the power cords attached to the William G, and that the power cords "were not locked." [*Id.*]

Soued hired James Cote as a liability expert to review the findings of, among others, Schaal and determine the cause of the fire. [Cote Decl. ¶¶ 1, 9, Ex. 2 (Docket No. 65-14).] Cote issued his own report, criticizing Schaal's investigation, reports, and conclusions. [*Id.* ¶ 9, Ex. 2.] Cote finds Schaal's conclusions unreliable because Schaal did not follow NFPA 921's methods since he did not: (1) "thoroughly investigate all possible ignition sources on both boats;" (2) "investigate commonly-known deficiencies with the marina's shore power

supply to boats docked on the [F-Dock];” (3) consider a “2018 lightning strike that hit a sailboat” at the F-Dock that damaged several boats including the William G; (4) “investigate that the cause may have related to two 2019 (pre-fire) electrical fire events” on the Lady Lisa while the boat was docked in the F-39 slip connected to that slip’s power pedestal; and (5) consider that the Marina’s handyman, an unlicensed electrician, made repairs to the F-39 slip’s power pedestal. [*Id.* ¶¶ 6-7.] According to Cote, the NFPA 921 requires that the fire’s origin and cause be classified as “undetermined.” [*Id.* ¶ 9, Ex. 2, at 35.]

Cote also accuses Schaal of “confirmation bias”—meaning, Schaal determined the fire was electrical and focused his investigation to confirm that finding, ignoring other hypothetical origins or causes. [*Id.* at 10, 17, 22, 31, and 35.] While Cote did not attend the investigations, he reviewed the photographs and reports prepared by the investigators and concludes that the fire pattern on the houseboat (which suffered minimal damage) “supports the hypothesis that the fire started on the Majestic and spread to the William G.” [*Id.* at 10.] Cote posits “[h]ad the fire started on the starboard side of the William G, one would expect more extensive heat and fire damage to the houseboat as flames spread up and out to the Majestic.” [*Id.*]

Following Cote’s report, Schaal issued a third report rebutting Cote’s conclusions and attacks on his first two reports. [*Id.* ¶ 9, Ex. 6.] Schaal contends that Cote’s suggestion the fire started on the Majestic and spread to the William G is “simply misleading and inaccurate.” [*Id.* at 2.] Pointing to surveillance photographs depicting the fire, Schaal asserts the pictures “show[] that the fire on the William G” had “consumed the super structure” while the fire on the Majestic was still “heavily involved” but the vessel was “not consumed.” [*Id.* at 2-3.] And looking to another photograph, Schaal notes the fire on the William G

covered bow to stern while the fire on the Majestic did not reach the bow—evidence suggesting the fire started on the William G. [*Id.* at 4.] Next, relying on the flame direction shown in the photos, Schaal asserts the wind pushed the fire “indicating that the fire originated on the William G.” [*Id.* at 3-4.] According to Schaal, “[i]f the fire originated on the Majestic” (as Cote suggests), “based on the wind direction, then the William G should have suffered minimal damage consistent with the lack of damage to the houseboat that was to the starboard side of the William G.” [*Id.*] Schaal argues “[f]ire does not burn against the wind, the wind pushes the fire in the same direction as the wind.” [*Id.*] Finally, Schaal defends his conclusion that the fire resulted “by the abnormal electrical activity” on the shore power cords’ “plug blades.” [*Id.* at 6.] Schaal states that if the fire originated elsewhere, he “would not except to see the noted electrical activity on the shore power plug blades as noted in this case.” [*Id.*]

D. Soued Seeks Exoneration and to Limit his Liability for the Fire and ACE’s and Marina’s Claims

Following the fire, the Marina demanded Soued to pay it about \$106,000 for damages to the dock caused by the fire. [Docket No. 1.] Soued then filed this action seeking exoneration and to limit his liability under the Limitation Act and Rule F of the Supplemental Rules for Certain Admiralty and Maritime Claims (Rule). [*Id.*] By that Act and Rule, a shipowner can seek exoneration or limit his liability to the value of his ship for any damage caused by an accident without his “privity or knowledge.” 46 U.S.C. § 30523(b); *see also Compl. of Consol. Coal Co.*, 123 F.3d 126, 132 (3d Cir. 1997). “The value of the vessel is determined as of the completion of the voyage during which the claimed incident occurred.” *Matter of Manhattan by Sail, Inc.*, 436 F. Supp. 3d 803, 812 (S.D.N.Y. 2020).

To determine whether a shipowner is entitled to exoneration or limit his liability, courts must first determine whether negligence or the vessel's unseaworthiness caused the damage. *Consol. Coal*, 123 F.3d at 132. A claimant must show the shipowner was negligent or the vessel was unseaworthy. *Id.* If the claimant makes either showing, then the shipowner must show the damage occurred "without the privity and knowledge of the owner." *Id.* "In the case of individual owners, it has been commonly held or declared that privity as used in the statute means some personal participation of the owner in the fault or negligence which caused or contributed to the loss or injury." *In re Hartman*, 2010 WL 1529488, at *4 (D.N.J. Apr. 15, 2010) (quoting *Coryell v. Phipps*, 317 U.S. 406, 411 (1943)). If a claimant shows the shipowner was negligent or the ship was unseaworthy, and the shipowner cannot establish a lack of privity or knowledge, then the shipowner cannot obtain exoneration or limit his liability.

Both ACE and the Marina filed claims against Soued, seeking to recover the costs for damage caused by the fire. [Docket Nos. 4, 8.] They both contend Soued was negligent and the William G was unseaworthy. [*Id.*] The Marina seeks to hold Soued liable for the \$106,000 damages to its dock. [Docket No. 4.] ACE, who paid the Majestic's owner's insurance claim, seeks to recover over a million dollars in damages for the Majestic's loss. [Docket No. 8.]

E. Soued's Summary Judgment Motion to Exclude Schaal as an Expert

Soued moves to exclude Schaal as an expert witness, arguing his opinions are unreliable because he did not follow the NFPA 921's requirements. [Pl. Mem. of Law in Support of Mot. Summ. J. 10-22 (Pl. Br.) (Docket No. 65-1).] Soued contends Schaal flouted the NFPA by forming a hypothesis on the origin and cause of the fire before he collected and

analyzed any data. [*Id.* 12-13.] He also faults Schaal for not performing any testing to confirm his findings and disregarding other possible ignition sources for the fire. [*Id.* at 14, 17-22.]

Pointing to Schaal's deposition testimony, Soued argues Schaal had confirmation bias since the investigator looked only for evidence to confirm his preconceived hypothesis that the fire started on the William G because of abnormal electrical activity. [*Id.* at 15-16.] Soued argues Schaal had no interest in investigating the Majestic or other areas of the William G because he already made up his mind on the cause of the fire. [*Id.* at 16-17.] He also asserts that Schaal did not consider other potential ignition sources on the William G, like the Glendinning system or electrical panel, even though those components were near the origin point of the fire Schaal had identified. [*Id.* at 16-17.] Lastly, relying on Third Circuit precedent, Soued argues that Schaal's failure to follow the NFPA 921 renders his opinion unreliable because this Circuit requires experts to reliably apply their methodology. [Pl. Reply Mem. of Law in Further Supp. of Mot. for Summ. J. 4 (Reply Br.) (citing *In re Paoli R.R. Yard PCB Litig.*, 35 F.3d 717 (3d Cir. 1994) & *In re Zolof (Sertraline Hydrochloride) Prods. Liab. Litig.*, 858 F.3d 787 (3d Cir. 2017)) (Docket No. 74).]

With Schaal expert's testimony excluded, Soued argues he is entitled to summary judgment. [Pl. Br. at 33.] Because no one saw how or where the fire started, Soued contends ACE needs an expert to establish his liability. [*Id.* at 3.] Without such evidence, Soued contends ACE cannot defeat his entitlement to exoneration or limitation of liability under the Limitation Act and Rule. [*Id.*]

II. GOVERNING LAW

A. Summary Judgment Standard

Courts must grant summary judgment if “the movant shows that there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law.” Fed. R. Civ. P. 56(a); *Celotex Corp. v. Catrett*, 477 U.S. 317, 322 (1986). A fact is “material” only if it might impact the “outcome of the suit under the governing law.” *Gonzalez v. Sec’y of Dep’t of Homeland Sec.*, 678 F.3d 254, 261 (3d Cir. 2012). A dispute is “genuine” if the evidence would allow a reasonable jury to find for the nonmoving party. *Id.* When deciding a summary judgment motion, a court must construe the facts and inferences in the light most favorable to the nonmoving party. *Penn. Coal Ass’n v. Babbitt*, 63 F.3d 231, 236 (3d Cir. 1995); *Pollock v. Am. Tel. & Tel. Long Lines*, 794 F.2d 860, 864 (3d Cir. 1986). A court’s role at summary judgment is not “to weigh the evidence and determine the truth of the matter, but to determine whether there is a genuine issue for trial.” *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 249 (1986).

B. Expert Witness Standard

When a party challenges the reliability of an expert’s opinion, like Soued does here, courts must determine whether the opinion is admissible under Federal Rules of Evidence 702 and *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993). *K.G. v. Owl City*, 2023 WL 3735891, at *4 (D.N.J. May 31, 2023). Both Rule 702 and *Daubert* impose gatekeeping obligations on courts to ensure expert evidence is both reliable and relevant. *UGI Sunbury LLC v. A Permanent Easement for 1.7575 Acres*, 949 F.3d 825, 832 (3d Cir. 2020). Rule 702 allows a qualified expert to give opinion testimony if:

- (a) the expert’s scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue;

- (b) the testimony is based on sufficient facts or data;
- (c) the testimony is the product of reliable principles and methods; and
- (d) the expert has reliably applied the principles and methods to the facts of the case.

The Third Circuit has described Rule 702's requirements as a "trilogy of restrictions on expert testimony: qualification, reliability, and fit." *Kuhar v. Petzl Co.*, 2022 WL 1101580, at *7 (3d Cir. Apr. 13, 2022) (cleaned up) (quoting *Calhoun v. Yamaha Motor Corp., U.S.A.*, 350 F.3d 316, 321 (3d Cir. 2003)). Because Soued only challenges Schaal's expert reports and opinions as unreliable, this Court will focus its analysis on Rule 702's and *Daubert*'s reliability requirements. [Pl. Br. at 9.]

Both Rule 702 and *Daubert* require expert testimony "to be 'based on the methods and procedures of science, not on subjective belief and unsupported speculation.'" *UGI Sunbury*, 949 F.3d at 842-43 (quoting *Karlo v. Pittsburgh Glass Works, LLC*, 849 F.3d 61, 80-81 (3d Cir. 2017)). The reliability requirement "ensures that there is a sufficient connection between conclusions and methodology." *Kuhar*, 2022 WL 1101580, at *7 (quoting *Oddi v. Ford Motor Co.*, 234 F.3d 136, 146 (3d Cir. 2000)). Courts must exclude expert testimony if "there is simply too great a gap between the data and the opinion proffered." *Oddi*, 234 F.3d at 146 (quoting *Gen. Elec. Co. v. Joiner*, 522 U.S. 136, 146 (1997)). That said, the admissibility of expert testimony "is not based on whether an expert's 'opinion has the best foundation, or even whether the opinion is supported by the best methodology or unassailable research,'" *UGI Sunbury*, 949 F.3d at 834 (quoting *Karlo*, 849 F.3d at 81), or whether the opinion is even correct, *Oddi*, 234 F.3d at 146.

Rather, the expert's opinion must rest on "good grounds," such as

- (1) whether a method consists of a testable hypothesis; (2)
- whether the method has been subject to peer review; (3) the

known or potential rate of error; (4) the existence and maintenance of standards controlling the technique's operation; (5) whether the method is generally accepted; (6) the relationship of the technique to methods which have been established to be reliable; (7) the qualifications of the expert witness testifying based on the methodology; and (8) the non-judicial uses to which the method has been put.

Kuhar, 2022 WL 1101580, at *7 (quoting *UGI Sunbury*, 949 F.3d at 834). But “good grounds” do not require that an expert’s opinion be perfect. Indeed, “an expert opinion is not inadmissible because it may contain flaws, nor is it excludable because it provides testimony regarding only one facet or aspect of an action but does not prove the whole case; such vulnerabilities affect the weight of the testimony, not its admissibility.” *N.J. Dep’t of Envtl. Prot. v. Amerada Hess Corp.*, 2019 WL 4052431, at *6 (D.N.J. Aug. 28, 2019) (quoting *Feit v. Great-West Life & Annuity Ins.*, 460 F. Supp. 2d 632, 641 (D.N.J. 2006)). The Court is also not restricted to any “definitive checklist or test.” *Daubert*, 509 U.S. at 593. The reliability inquiry is “a flexible one” focusing “solely on the principles and methodology, not on the conclusions that they generate.” *Id.* at 595. The standard for determining reliability “is not that high” and the Rules of Evidence “embody a strong and undeniable preference for admitting any evidence which has the potential for assisting the trier of fact.” *Oddi*, 234 F.3d at 155-56 (citations and internal quotation marks omitted).

III. DISCUSSION

Soued does not challenge the reliability of NFPA 921’s methodology. That would be a daunting task because courts in this District and throughout the country have routinely found NFPA 921’s methodology to be reliable under Rule 702. *Ford v. Ford Motor Co.*, 311 F. Supp. 3d 667, 679 (D.N.J. 2017); *Medina v. Daimler Trucks N. Am., LLC*, 2014 WL 7405210, at *9 (D.N.J. Dec. 30, 2014); *U.S. v. Zhou*, 2008 WL 4067103, at *5 (D.N.J. Aug. 25, 2008);

see also Russel v. Whirlpool Corp., 702 F.3d 450, 455 (8th Cir. 2012); *Bell Corp. v. Air Tech of Mich., Inc.*, 2022 WL 1801120, at *5 (N.D. Ind. June 2, 2022); *Woods Hole Oceanographic Inst. v. ATS Specialized, Inc.*, 2021 WL 9860239, at *5 (D. Mass. May 27, 2021); *Cnty. Ass'n Underwriters of Am., Inc. v. Rhodes Dev. Grp., Inc.*, 2013 WL 818596, at *11 (M.D. Pa. Mar. 5, 2013). Indeed, the NFPA 921 is the “gold standard” for fire investigations. *McCoy v. Whirlpool*, 214 F.R.D. 646, 653 (D. Kan. 2003).

Instead, he argues Schaal’s opinions are unreliable because he did not follow the NFPA 921’s methodology. [Pl Br. at 9.] Pointing to various decisions, Soued contends that when a fire investigator, like Schaal here, purports to follow the NFPA 921, but fails to do so, courts have excluded the investigator’s testimony as unreliable. [*Id.* at 9-10 (collecting cases).] True, some courts have excluded a fire investigator’s opinion when the investigator claims to follow the NFPA 921, but does not reliably apply its methods. *See, e.g., Fireman’s Fund Ins. Co. v. Canon U.S.A., Inc.*, 394 F.3d 1054, 1059-60 (8th Cir. 2005) (affirming exclusion of experts’ opinions because “experts did not apply the principles and methods of NFPA 921 reliably to the facts of the case” since “neither expert carefully examined this hypothesis of fire origin against empirical data obtained from fire scene analysis and appropriate testing, as required by NFPA 921”); *Zhou*, 2008 WL 4067103, at *6 (“The Court finds that the methodology applied by [expert] to perform his investigation is not apparent from his report, there is nothing to suggest that he applied the methodology required by NFPA 921, and [expert’s] report appears based on subjective belief, rather than scientific methods.”).

Thus, this Court turns to Schaal’s investigation to determine whether he reliably applied the NFPA 921 when reaching his conclusions. Again, this Court’s role is not to determine whether Schaal’s conclusions are correct. *Oddi*, 234 F.3d at 146. Rather, the Court

must determine whether Schaal reliably applied his methodology. *Zoloft*, 858 F.3d at 792. This is so because an expert must “employ[] in the courtroom the same level of intellectual rigor that characterizes the practice of an expert in the relevant field.” *Kumho Tire Co., v. Carmichael*, 526 U.S. 137, 152 (1999). But this Court cannot “usurp the role of the fact-finder,” and will exclude Schaal’s opinions only “if the flaw is large enough that the expert lacks the ‘good grounds’ for his . . . conclusions.” *Zoloft*, 858 F.3d at 792-93 (citations, internal quotation marks, and footnote omitted).

A. Schaal’s Compliance with NFPA 921’s Methodology

When investigating a fire or explosion, the NFPA 921 requires an investigator to first “determine and establish origin(s)” and “then investigate the cause: circumstances, conditions, or agencies that brought the ignition source, fuel, and oxidant together.” § 4.1. The NFPA instructs investigators to use the scientific method to make an origin determination. § 18.2. NFPA’s scientific method involves identifying and defining the problem, collecting data, analyzing that data, developing hypotheses, testing the hypotheses, and selecting a final hypothesis or conclusion. § 4.3; *see also* § 18.2.

To define the problem, the NFPA instructs investigators to examine the scene, review previously conducted investigations of the fire, interview witnesses or knowledgeable persons, and look to the results of any scientific tests. § 4.3.2. After defining the problem, an investigator must gather facts about the fire through “observation, experiment, or other direct data-gathering means.” § 4.3.3. Next, the investigator must analyze the data collected. § 4.3.4*. This can be done by using the investigator’s “knowledge, training, experience, and expertise.” *Id.* But the investigator must complete this step before forming a hypothesis on the origin and cause of the fire. *Id.* After analyzing the data, the investigator formulates a

hypothesis “to explain the phenomena, whether it be the nature of the fire patterns, fire spread, identification of the origin, the ignition sequence, the fire cause, or the cause of damage or responsibilities for the fire or explosion incident.” § 4.3.5*. This process is done by “inductive reasoning.” *Id.* The hypothesis developed “should be based solely on the empirical data that the investigator has collected through observation and then developed into explanations for the event, which are based upon the investigator's knowledge, training, experience, and expertise.” *Id.* Finally, the investigator must test the hypothesis through “the principle of deductive reasoning.” § 4.3.6*. The investigator can test the hypothesis by physical experiments, “analytically by applying scientific principles, or by referring to scientific research.” *Id.* The investigator must test “until all feasible hypotheses have been tested and one is determined to be uniquely consistent with the facts and with the principles of science.” *Id.*

To make an origin determination, an investigator may consider: (1) witness information and electronic data; (2) fire patterns; (3) arc mapping; and (4) fire dynamics. *Id.* § 18.1.2. In addition, investigators “should use all available resources to develop origin and spread hypotheses and to determine which hypotheses fit all of the evidence available.” *Id.* § 18.1.2.1. In certain cases, “a single item, such as an irrefutable article of physical evidence, or a credible witness to the ignition, or a video recording, may be the basis for a determination of origin.” *Id.* The ignition source for the fire “will be at or near the point of origin at the time of ignition.” *Id.* § 19.1.2.1.

Here, Schaal followed the NFPA 921 and any deviation from its standards do not render his opinion unreliable. To start, the NFPA 921 called for Schaal to identify and define the problem, which was clear: determine the origin and cause of the fire that destroyed both

boats. Then Schaal started collecting data by photographing both vessels in a 360-degree pattern, physically examining both boats, and examining the fire patterns on the vessels. Based “upon the relative amount of damage to the two boats, and the location of damage,” Schaal determined the fire did not start on the Majestic. [Schaal Decl. ¶ 6.] Schaal then physically investigated the William G. Schaal’s investigative approach—starting with the least damaged area and moving toward the most damaged area—follows the NFPA 921’s guidance. NFPA § 18.3.1.3 (discussing preferred order of examinations).

Once on the William G, Schaal again used the NFPA 921’s preferred order of examination by working from areas of the least damage to the greatest. By using this process, Schaal “was able to isolate the general area of origin.” [Schaal Decl. ¶ 9.] After locating the area of origin, Schaal and the other investigators started delayering the William G—a process the NFPA endorses because it “allows the investigator to observe patterns on exposed surfaces and to locate evidence that can assist in making an accurate origin analysis.” NFPA § 18.3.2. During the delayering process, Schaal uncovered remnants of the power cords that exhibited evidence of abnormal electrical activity, such as pitting and arcing to the cords’ metal plug blades. Schaal later refined his analysis by examining surveillance footage depicting the fire, and reviewing discovery materials, including deposition testimony of various witnesses.

Schaal relied on the precise information that the NFPA 921 identifies as a relevant to an origin determination. NFPA § 18.1.2. He also conducted the investigation in the manner the NFPA 921 contemplates—working from areas of least to greatest damage and delayering to isolate the origin area. *Id.* §§ 18.3.1.3, 18.3.2. That Schaal may have looked for an ignition source before making his origin determination does not render his opinions unreliable. Indeed, the NFPA 921 explains the ignition source is important to determine both the origin

and cause of the fire. *Id.* § 18.1 (defining point of origin as “the exact physical location within the area of origin where a heat source and the fuel interact, resulting in a fire or explosion”); *id.* § 18.6.1.1 (requiring investigators to consider whether “there is a component ignition source at the hypothetical origin”).

Despite Soued’s (and Cote’s) contrary arguments, the record reveals that Schaal did not ignore other hypothetical origins. Rather, he dismissed those origins given the data he had. For example, when ruling out the Majestic as the origin of the fire, Schaal looked to, among other things, surveillance footage depicting the fire, the wind patterns on the night of the fire, and the fire damage to the boats. Indeed, one picture shows the fire had consumed the William G’s super structure while the Majestic’s super structure was still “heavily involved with the fire but not consumed.” [Cote Decl. ¶ 9, Ex. 6, at 2-3.] Another picture depicts the William G’s “bow to the stern” “heavily involved” with fire while the Majestic’s bow was not burning. [*Id.* at 3-4.] And another picture shows the wind’s effect on the fire, pushing the flames toward the Majestic. [*Id.* at 4-5.] Based on the flames depicted in the picture, Schaal concluded the fire could not have started on the Majestic, otherwise, the wind would have pushed the flames away from the William G reducing the boat’s exposure to the fire. [*Id.*]

The surveillance footage Schaal relied on is critical information for the origin determination. NFPA § 18.2.1.2. That footage, coupled with his analysis of the fire patterns on the Majestic, allowed Schaal to rule out the Majestic as the origin of the fire. For example, when testing a hypothesis, the NFPA 921 instructs investigators to see if “the origin explain[s] the data” and whether “an alternate origin explain[s] the data equally well.” *Id.* § 18.2 (Figure 18.2). The Majestic as a hypothetical origin area does not explain the data Schaal had collected. Indeed, had the fire originated on the Majestic, then the William G should have

suffered minimal damage based on the wind patterns, which did not happen. Thus, the Majestic as hypothetical origin conflicts with the available data. Similarly, the data collected explains Schaal's conclusion that the fire started on the William G based on the wind direction and the minimal damage the houseboat suffered. Accordingly, the available data Schaal had allowed him to rule out alternate origins, like the Majestic.

Likewise, Schaal considered and ruled out other potential ignore sources in the origin area. For example, he explained that had the fire started at another location, he "would not expect to see the noted electrical activity on the shore power plug blades as noted in this case." [Cote Decl. ¶ 9, Ex. 6, at 6.] At his deposition, Schaal explained that if the fire started someplace else, then the fire would have attacked the power cords in a way to deenergize them, and he would not have observed the pitting and arcing he observed on the cords' plug blades. [Hager Certif. ¶ 4, Ex. 3 (Tr. 47:11 to 23, 48:17 to 49:2).] Through deductive reasoning, Schaal ruled out other potential causes for the fire.

Given Schaal's investigation and his reliance on the NFPA 921 as a guide, the Court finds his opinions are reliable under Rule 702 and *Daubert* to warrant admission in evidence.

B. Soued's Criticisms of Schaal's Investigation and Opinions

Many of Soued's arguments on Schaal's investigation and opinions go to the weight of his testimony rather than its admissibility. First, Soued ignores that the NFPA 921 is merely a guide to assist fire investigators and its provisions are "nonmandatory." *Alford v. Allstate Ins.*, 2013 WL 12181846, at * 3 (E.D. Mich. July 8, 2013); *see also* NFPA § 1.2.1 ("The purpose of this document is to establish guidelines and recommendations for the safe and systematic investigation or analysis of fire and explosion incidents."). An investigator's failure to strictly adhere to the NFPA 921 does not render his or her conclusions unreliable.

Kendall Dealership Holdings, LLC v. Warren Distrib., Inc., 561 F Supp. 3d 854, 861 (D. Alaska Sept. 23, 2021) (“A deviation from NFPA 921 does not render [expert’s] testimony unreliable.”).

Second, several courts have considered many of the same arguments Soued makes here to exclude Schaal’s opinions—failure to test a hypothesis, failure to consider other causes or origins, and an expert’s deviation from NFPA 921’s standards—and rejected them. *Homesite Ins. of Midwest v. Olson*, 2023 WL 2746282, at *7 (E.D. Mich. Mar. 31, 2023) (“[N]ot only does the law not require strict adherence to NFPA 921, the law does not require that [an investigator] test each and every possible cause of the subject fire.”); *Allstate Prop. & Cas. Ins. Co. v. Haier US Appliance Sols., Inc.*, 2022 WL 906049, at *7 (M.D. Pa. Mar. 28, 2022) (rejecting defendants’ arguments that expert’s testimony was unreliable “because of errors in how [expert] applied the NFPA 921 methodology”). That Schaal did not consider other items as potential ignition sources, such as the power switch found in the origin area, goes to the weight the fact finder places on his testimony. *Philadelphia Indem. Ins. Co. v. BMW of N. Am. LLC*, 2015 WL 5693525, at *10 (D. Ariz. Sept. 29, 2015) (refusing to exclude expert’s testimony on fire’s origin and finding defendant’s argument that expert disregarded “electrical items” near the area of origin “goes to the weight, not the admissibility, of [expert’s] opinions”); *see also Allstate Ins. Co. v. Gonyo*, 2009 WL 1212481, at *6 (N.D.N.Y. Apr. 30, 2008) (“If there is any question that [expert] did not eliminate every cause for the fire, this will not be determinative as to whether he will testify; all that it suggests is that the credibility of his decision may be subject to an attack.”). And his supposed failure to consider the Marina’s electrical problems with the F-dock’s power pedestals, the other fire incidents, and the 2018 lightning strike also goes to the weight of his testimony. *Woods Hole*, 2021 WL 9860239, at

*6 (allowing expert testimony and ruling defendant’s criticism of expert’s opinions “go to the weight of the proffered testimony, not to its admissibility” (quoting *Crowe v. Marchand*, 506 F.3d 13, 18 (1st Cir. 2007))).

Third, Soued points to no case excluding a fire investigator’s opinion on the origin and cause of a fire because the investigator relied on deposition testimony or discovery materials, such as surveillance footage. The NFPA 921 supports the use of such information to help an investigator determine a fire’s origin. NFPA § 18.2.1.2 (“The investigator should use all available resources to develop origin and spread hypotheses. . . .”); *id.* § 18.1.2 (explaining the origin determination “involves the coordination of information” such as “observations reported by persons who witnessed the fire or were aware of conditions present at the time of the fire” and “electronic data” such as “security camera footage”). And Soued has not shown how Schaal’s use of the discovery materials renders his opinion unreliable. *Netherlands Ins. Co. v. HP, Inc.*, 2022 WL 17417799, at *5-6 (D. Mass. Dec. 5, 2022) (rejecting similar argument). In any event, Schaal used that information along with other information he obtained firsthand from his investigation when formulating his opinions.

And finally, Soued’s reliance on various cases excluding a fire investigator’s opinion as unreliable is misplaced. For example, in one case, the expert “solely and entirely” relied on another expert’s opinion on the cause of the fire (who was not qualified to render such an opinion) and did not eliminate an obvious cause despite known evidence suggesting that cause. *Kozar v. Sharp Elecs. Corp.*, 2005 WL 2456227, at *3-4 (W.D. Pa. Sept. 30, 2005). In another, the expert merely criticized the other agencies’ investigations and did not “offer his own independent examination or testing.” *Zhou*, 2008 WL 4067103, at *5-6. And in the other case, the court excluded the expert’s opinion because the expert offered no evidence to

support his hypothesized cause, relied on assumptions, did not consider all available evidence and alternate hypothesis, and ruled out a cause of a fire based solely on another investigator's statement. *State v. Farm & Cas. Co. v. Steffen*, 948 F. Supp.2d 434, 442-46 (E.D. Pa. 2013). Although Schaal's investigation was far from perfect, he did not make the similar fatal missteps in his investigation like the above experts did.

While Soued may have valid criticisms of Schaal's investigation and opinions, cross-examination and rebuttal expert testimony are the appropriate avenues to challenge Schaal's opinions. *Allstate Prop. & Cas. Ins.*, 2022 WL 906049, at *7; *see also Gonyo*, 2009 WL 1212481, at *7. Indeed, "[v]igorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof are the traditional and appropriate means of attacking shaky but admissible evidence." *Daubert*, 509 U.S. at 596.

IV. CONCLUSION

For the above reasons, this Court **DENIES** Plaintiff Dr. George J. Soued's summary judgment motion [Docket No. 65].

An accompanying Order as of today's date shall issue.

s/Renée Marie Bumb
RENÉE MARIE BUMB
Chief United States District Judge

Dated: August 31, 2023